A.D. 1856 . . . . . N° 3040.

SPECIFICATION

OF

WILLIAM EDWARD NEWTON.

CAPSULES FOR MEDICINES.

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Capsules for Medicines.

(*This Invention received Provisional Protection, but notice to proceed with the application for Letters Patent was not given within the time prescribed by the Act.*)

PROVISIONAL SPECIFICATION left by William Edward Newton at the Office of the Commissioners of Patents, with his Petition, on the 23rd December 1856.—A communication from Mr. Jean Hegnaner of Uster, near Zurich, Switzerland.

I, WILLIAM EDWARD NEWTON, of the Office for Patents, 66, Chancery Lane, in the County of Middlesex, Civil Engineer, do hereby declare the nature of the said Invention for "**AN IMPROVED MODE OF MANUFACTURING CAPSULES FOR CONTAINING MEDICINES**," to be as follows :—

This Invention relates to a novel method of manufacturing capsules of gelatine or other suitable material for containing medicine, the object being to produce a large number at a time with great facility. For this purpose a number of cores are first cast of some material, such as stearine, spermaceti, wax, or other substance that will melt at a low temperature. These fusible cores are afterwards immersed in the gelatine in a liquid state. By this means the cores will be covered with a film of gelatine of the desired thickness, and when the gelatine is dry heat, is applied to melt out the fusible cores, thus leaving the capsules empty and ready for use.

For the production of the fusible cores a mould frame is provided, fitted with transverse blocks set in pairs, each of which has cut or formed in its side a half mould of the form of the core desired to be produced, so that when brought together each pair forms a series of complete moulds, one of each pair being moveable for the purpose of delivering out the cores when formed. This mould frame is run on a railway under a vessel containing the substance

of which the cores are to be formed, and which is kept in a state of fusion by being placed over a furnace. A number of small pipes project from the under side of this vessel, corresponding to the number of moulds in the mould frame, and when this latter has been introduced the melted material is allowed to run from these pipes into and fill the moulds.

The substance the Inventor prefers to employ for producing these cores is either stearine or spermaceti, especially when the medicine desired to be enclosed consists of such substances as balsam of copaiba, cubebs, &c., as such substances will dissolve any particles of stearine or spermaceti that might remain in the finished capsules; but other analogous substances, such as tallow or wax, may be used if preferred.

When the moulds are filled, the mould frame is run out and the cores are allowed to cool. A frame, carrying a number of spindles corresponding to the number of cores, is then placed over the mould frame in such a manner that when lowered the spindles will be inserted into the cores, and when the moulds are opened the cores will be found sticking on the spindles. The cores are removed on the spindles and then immersed in a vessel containing liquid gelatine, by which means a film of that substance will be deposited on the fusible cores. When the gelatine has become cold and set, the spindle frame is turned over with the covered cores uppermost, and on heat being applied, the fusible cores will be melted out from the gelatine which covers them, the molten substance composing the cores being allowed to run down the spindles into a trough below, leaving the finished gelatine capsules on the spindles, from which they are removed and conveyed to an apparatus to be filled with the medicine. This latter apparatus is provided with blocks of wood having apertures capable of receiving the larger portions or bodies of the capsules (which are in the form of a small bottle or flask). Metal plates having apertures of the same size as the necks of the capsules are also adapted to the apparatus, and a sheet of caoutchouc is placed between the metal plate and the wooden blocks. This sheet of caoutchouc has apertures somewhat smaller than the necks of the capsules, so that on being pressed upon, the caoutchouc will seize hold of the necks and hold them firmly. The capsules are now filled with the medicine by pipes, in a similar manner to that employed for filling the core moulds, and their mouths having been closed with a drop of gelatine, they are ready for use.

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